

# Sierra and High Sierra Low Latency Driver Installation

To Install the Low Latency driver the existing AppleUSBFTDI.kext driver must be disabled. On Sierra and High Sierra this requires the System Integrity Protection to be temporarily disabled

## System Integrity Protection in MacOS Sierra

There are 2 issues with MacOS Sierra and possibly macOS El Capitan in the documented method to disable the AppleUSBFTDI.kext in order to let the maclow2p3 load.

- AppleUSBFTDI.kext is located in a different folder
- The macOS needs the System Integrity Protection to be disabled first before renaming kexts

### 1) Disable SIP

- Restart the Mac on the recovery session (CMD+R depressed during start-up)
- Open Terminal
- Type "csr disable" or "csrutil disable" depending on the exact version of MacOS and validate
- You should see a warning message saying that you are disabling System Integrity Protection
- Restart Normally

### 2) Deactivate the AppleUSBFTDI.kext

- Open Terminal (Be sure to be logged as an administrator account of MacOS)
- Type "cd /System/Library/Extensions"
- Disable the Mac driver "sudo mv AppleUSBFTDI.kext AppleUSBFTDI.disabled"
- Type Enter and password to validate
- Type "ls" to show the contents of the directory and verify that the AppleUSBFTDI.kext is renamed as AppleUSBFTDI.disabled

### 3) To Reactivate SIP

- Restart the Mac on the recovery session (CMD+R depressed during start-up)
- Open Terminal
- Type "csr enable" or "csrutil enable" depending on the exact version of MacOS and validate
- Terminal should warn you that you are enabling System Integrity Protection
- Restart Normally

### 4) Verify that the maclow2p3 is loading and that AppleUSBFTDI is not as follows:-

- Open System Information of macOS - Apple Menu/About this Mac/More Info/system report/Software/Extensions
- AppleUSBFTDI should not be present
- maclow2p3 should be present AND loaded (if a USB422 is connected).

That's it!

Please note that Apple OS big updates could reactivate the AppleUSBFTDI.kext. It's then important to verify that it stays disabled after any major OS upgrade.

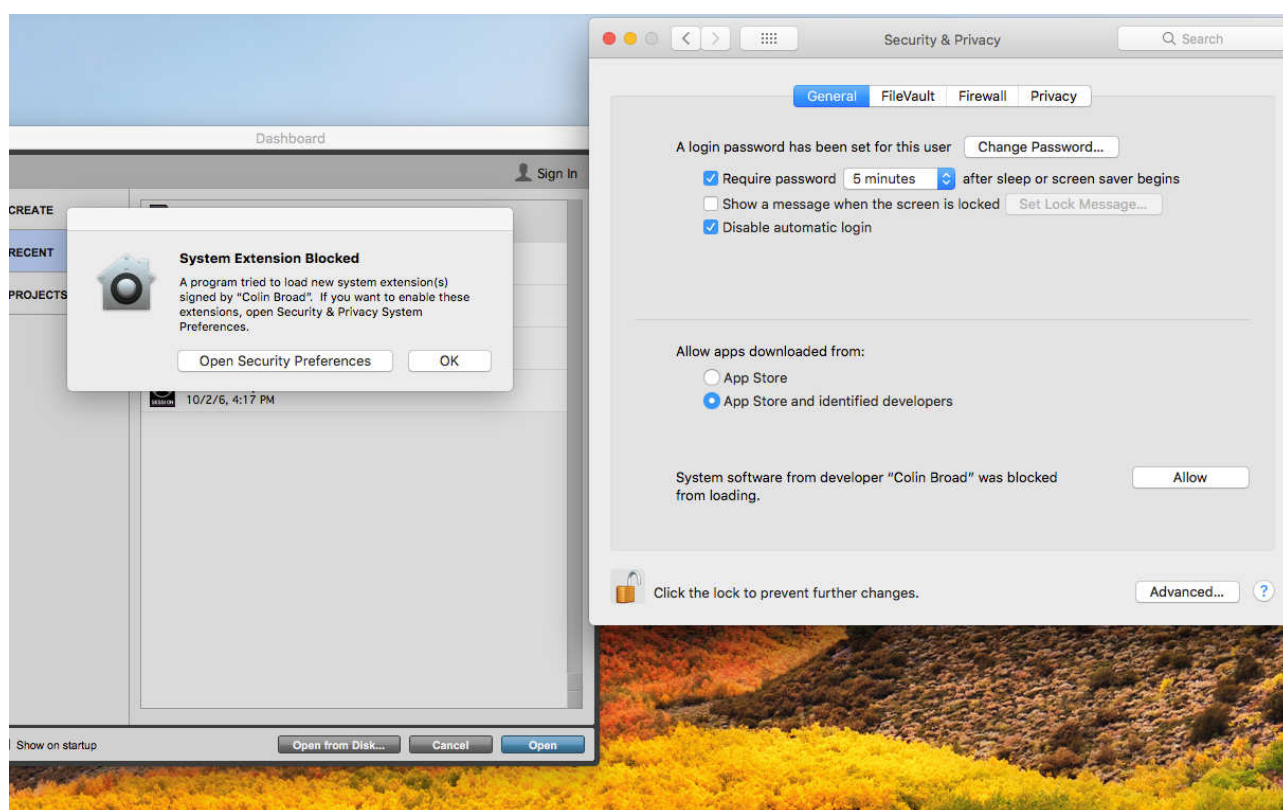
Thanks to Jonathan Martins for the concise information above!

## High Sierra

Performance wise the driver performs the same on High Sierra as it does on Sierra. Tested with ProTools release 2018.3 and with the latest ProTools beta release.

Installation wise, there is just this one Apple issue that everybody (including Avid, Adobe...) fall into (see picture). All you can do is go to your system preferences and hitting Allow and sometimes you need to repeat the driver installation

Thanks to Alicja Golianek, Avid Audio QA Team Leader



## **Kext Drop**

Kext Drop is a user-friendly software solution for installing kernel extensions on OS X with a simple drag and drop. The utility detects the .kext module you want to load and then makes you confirm the installation.

The OS X operating system comes with a base kernel, but it also provides support for extending its capabilities with the help of custom kernel modules. The modules are used to support for new hardware, and can be easily removed when they are no longer required.

Kext Drop is a minimal OS X application designed to load custom kernel modules. The entire procedure is reduced to simply dragging and dropping the .kext package on top of the Kext Drop main window.

Within the Kext Drop window, you can see the name of the kernel module, and you must press the “Install” button to complete the procedure.

## **Disable the OS X SIP to install the kernel modules**

The latest OS X versions include the System Integrity Protection technology that prevents the root user to modify certain folders: /System, /usr, /bin, or /sbin. That means that you will have to disable the SIP protection to be able to load the .kext packages.

There are alternative software solutions for installing .kext modules that also include additional functionalities, such as Kext Utility or Kext Wizard.